L5 ANSWER 1 OF 32 MEDLINE on STN DUPLICATE 1
SO Molecular immunology, (2002 Jun) Vol. 38, No. 15, pp. 1101-11.
Journal code: 7905289. ISSN: 0161-5890.
AB We have previously shown a biochemical interaction between fibronectin (Fn) and polymeric immunoglobulins (Igs), that we localized to the fourth and fifth N-terminal type I repeats (4F1.5F1) in Fn and the Fc portion of IgG. Therefore, we hypothesized that Fn, as a constituent of the extracellular matrix (ECM) may directly bind circulating immune complexes (ICs) causing their deposition, thereby contributing to the pathogenesis of IC diseases. As an in vitro paradigm to test this idea, we have generated Fn-containing ECMs from varied cells in culture and demonstrated a saturable dose-dependent binding of aggregated (agg) IgG, as a prototype of ICs, as well as the binding of both heat and cold aggregated purified type I cryoglobulins (CGs) to these ECMs. No binding was observed to ECMs (Matrigel) that do not contain Fn. Characteristic of our previous findings, polymeric but not monomeric IgG bound to the acellular Fn-containing ECMs. To further demonstrate the specificity of the interaction and implicate matrix Fn in the binding of aggIgG, complete inhibition of binding of aggIgG to Fn was achieved by blocking Fn on the ECMs with anti-Fn antiserum and by preincubation of the Ig aggregates with anti-human IgG antibodies. By competing the binding interaction with fluid phase Fn and the Ig-binding site on Fn, 4F(1).5F(1), 70% inhibition was obtained. Additional experiments performed with purified CGs show that an identical dose-dependent increase in Fn binding occurred using both preformed and forming cryoprecipitates suggesting that Fn does not confer cryoprecipitation of CGs and that the specific association of Fn with cryoprecipitates probably results from their polymeric configuration. Our results support the notion that Fn, as it exits in expanding ECMs characteristic of glomerulonephropathies and rheumatoid synovial disease, specifically interacts with complexed/polymeric Igs, thereby perpetuating IC deposition and playing a role in the pathogenesis of IC diseases.

L5 ANSWER 18 OF 32 MEDLINE on STN DUPLICATE 16
SO Molecular immunology, (1983 Nov) Vol. 20, No. 11, pp. 1177-89. Ref: 88
Journal code: 7905289. ISSN: 0161-5890.
AB The majority of evidence supports the conclusion that IgG-dependent effectors respond to antibodies which have been polymerized artificially or by polyvalent antigens, but not to monomeric IgG antibodies. Effectors can distinguish polymerized IgG antibodies from monomeric IgG because they contain multiple receptor units and can interact multivalently with polymerized IgG. However, monomeric IgG is present at very high concns in plasma and interstitial fluids and will inhibit multivalent interactions in vivo between polymerized antibody and effectors. Such inhibition raises the question of how IgG-mediated effector responses could function in vivo. In this review we present a mathematical model which quantitatively predicts how polyvalent ligands interact multivalently with receptors in the presence of excess monovalent ligand. We then show that results from experiments in vitro using such diverse systems as the binding and endocytosis of immune complexes by macrophages, complement-mediated lysis of antibody-coated target cells, and ADCC can be explained qualitatively by the model. We conclude that monomeric IgG does not totally inhibit IgG-mediated effector functions but, rather, raises the threshold of antibody binding which is required to elicit a response. We then consider how non-immune IgG may serve as a homeostatic regulator of IgG-dependent responses, in vivo, perhaps for the purpose of inhibiting responses to low levels of cell-bound IgG autoantibodies.

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FULL ESTIMATED COST                                        25.37      25.58

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     FILE 'MEDLINE, EMBASE' ENTERED AT 10:42:56 ON 25 APR 2008
L1           487 S IGG? (5A)POLYMER?
L2            97 S L1 (10A) MONOMER?
L3         67781 S L2 NOT IGM? OR IGA?
L4            56 S L2 NOT (IGM? OR IGA?)
L5            32 DUP REM L4 (24 DUPLICATES REMOVED)

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